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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,675	02/13/2004	Toru Katagiri	826.1924	5874

21171 7590 03/21/2007  
STAAS & HALSEY LLP  
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1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER
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LI, SHI K

ART UNIT	PAPER NUMBER
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2613

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/777,675

Applicant(s)

KATAGIRI ET AL.

Examiner

Shi K. Li

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 2/13/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 claims a method. Claim 7 recites the limitation "which as an optical transmitting end station" in line 2 of the claim. That is, the method contains limitation of an apparatus.

Claim which is intended to embrace both apparatus and method is precluded by language of 35 U.S.C 101, which set forth statutory classes of invention in alternative only, and is also invalid under 35 U.S.C. 112, second paragraph, since claim which purports to be both method and apparatus is ambiguous and therefore does not particularly point out and distinctly claim subject matter of invention. See Ex parte Lyell, 17 USPQ2d 1548 (Bd. PA&I. 1990).

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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4. Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Bickham et al. (U.S. Patent 6,580,861 B2).

Bickham et al. teaches in FIG. 2 a transmission system comprising a number of blocks 14. Bickham et al. teaches in FIG. 4 the structure of each block 14 which comprises optical amplifiers 16 (equivalent to optical repeater nodes of instant claim). Bickham et al. teaches in FIG. 8 dispersion map where the first series of spans are over compensated and the second series compensated with residual dispersion occurs (see col. 7, lines 45-47).

5. Claims 1-2, 4, 7-8 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by Tager et al. (U.S. Patent Application Pub. 2004/0208608 A1).

Regarding claims 1 and 7, Tager et al. discloses in FIG. 15 an optical communication system. Tager et al. teaches in FIG. 6 overcompensation at 118 and residual dispersion at 117.

Regarding claims 2, 4, 8 and 10, Tager et al. teaches in paragraph [0029] and [0031] switching node and add/drop node.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tager et al. (U.S. Patent Application Pub. 2004/0208608 A1) in view of Tsuritani et al. (U.S. Patent 6,768,872 B1).

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Tager et al. has been discussed above in regard to claims 1-2, 4,7-8 and 10. The difference between Tager et al. and the claimed invention is that Tager et al. does not teach compensating gain deviation. Tsuritani et al. teaches in col. 3, lines 15-21 to equalize optical power and in col. 2, lines 19-21 to compensating dispersion slope so that it becomes practically zero. One of ordinary skill in the art would have been motivated to combine the teaching of Tsuritani et al. with the optical communication system of Tager et al. because these compensation ensures that all channels will have the same quality and allows the communication system to reach longer distance. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to compensate for gain deviation and dispersion slope, as taught by Tsuritani et al., in the optical communication system of Tager et al. because these compensation ensures that all channels will have the same quality and allows the communication system to reach longer distance.

8. Claims 5-6 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tager et al. (U.S. Patent Application Pub. 2004/0208608 A1) in view of Zhou (U.S. Patent Application Pub. 2003/0219198 A1).

Tager et al. has been discussed above in regard to claims 1-2, 4,7-8 and 10. The difference between Tager et al. and the claimed invention is that Tager et al. does not teach the bit rates of the wavelength channels. First, it is well known in the art that the bit rate for each wavelength channel is independent of the other wavelength channels. Second, bit rates of 10 Gbps and 40 Gbps are well known in the art. For example, Zhou teaches paragraph [0008] high speed TDM signals of 10 Gb/s, 40 Gb/s and more. One of ordinary skill in the art would have been motivated to combine the teaching of Zhou with the optical communication system of

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Tager et al. to transmit optical signals of 10 Gbps and 40 Gbps based on traffic need. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to transmit optical signals of 10 Gbps and 40 Gbps, as taught by Zhou, in the optical communication system of Tager et al. due to different traffic needs among the network nodes. The difference in bit rates for different wavelength channels may also due to the fact that certain facilities have been upgraded while the others are still operating at slower bit rates.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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skl

15 March 2007

A handwritten signature in black ink, appearing to read 'Shi K. Li' in a stylized, cursive script.

**Shi K. Li**  
**Patent Examiner**